

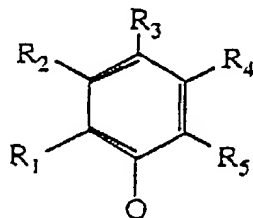
## CLAIMS

1. A catalytic composition, characterized in that it is obtained by mixing:
- at least one chromium compound;
  - with at least one aryloxy compound of an element M selected from the group formed by magnesium, calcium, strontium and barium, with general formula  $M(RO)_{2-n}X_n$ , where RO is an aryloxy radical containing 6 to 80 carbon atoms, X is a halogen or a hydrocarbyl radical containing 1 to 30 carbon atoms and n is a whole number that can take values of 0 to 2; and

- with at least one aluminum compound selected from the group <sup>consisting of</sup> ~~formed by~~ tris(hydrocarbyl)aluminum compounds and chlorinated or brominated hydrocarbylaluminum compounds, with general formula  $AlR'_mY_{3-m}$ , where R' is a hydrocarbyl radical containing 1 to 6 carbon atoms, Y is a chlorine or bromine atom and m is a number from 1 to 3, and aluminoxanes.

2. A composition according to claim 1, <sup>wherein</sup> ~~characterized in that~~ the chromium compound comprises one or more identical or different anions selected from the group <sup>consisting of</sup> ~~formed by~~ halides, carboxylates, acetylacetonates, and alkoxy <sup>and</sup> ~~or~~ aryloxy anions.

3. A composition according to claim 1 <sup>wherein</sup> ~~or claim 2, characterized in that~~ the aryloxy radical RO in the aryloxy compound of element M with general formula  $M(RO)_{2-n}X_n$  has general formula:



where R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub>, which may be identical or different, represent a hydrogen atom, a halogen atom or a hydrocarbyl radical containing 1 to 16 carbon atoms.

- 9 4. A composition according to ~~any one of claims 1 to 3~~ <sup>claim 1</sup>, characterized in that the aryloxy compound of element M is bis(2,6-diphenylphenoxy)magnesium, bis(2-tert-butyl-6-phenylphenoxy)magnesium or bis(2,4-di-tert-butyl-6-phenylphenoxy)magnesium.
- 5 9 5. A composition according to ~~any one of claims 1 to 4~~ <sup>claim 1</sup>, characterized in that the hydrocarbylaluminum compound is dichloroethylaluminum, ethylaluminum sesquichloride, chlorodiethylaluminum, chlorodiisobutylaluminum, triethylaluminum, tripropylaluminum, triisobutylaluminum or methylaluminoxane.
- 10 9 6. A composition according to ~~any one of claims 1 to 5~~ <sup>claim 1</sup>, characterized in that the hydrocarbylaluminum compound is triethylaluminum.
- 15 9 7. A composition according to ~~any one of claims 1 to 6~~ <sup>claim 1</sup>, characterized in that the components of the catalyst are brought into contact in a solvent comprising at least one saturated hydrocarbon, at least one unsaturated olefinic or diolefinic hydrocarbon and/or at least one aromatic hydrocarbon.
- 18 9 8. A composition according to ~~any one of claims 1 to 7~~ <sup>claim 1</sup>, characterized in that the chromium concentration in the catalytic solution is in the range  $1 \times 10^{-5}$  to 0.1 mole/l.
- 20 9 9. A composition according to ~~any one of claims 1 to 8~~ <sup>claim 1</sup>, characterized in that the mole ratio between the aryloxy compound of element M and the chromium compound is 1:1 to 30:1, and the mole ratio between the hydrocarbylaluminum compound and the chromium compound is 1:1 to 35:1.

- 25 SUB 10. An ethylene oligomerization process using a catalytic composition according to any one of claims 1 to 9.

11. A process according to claim 10, characterized in that the ethylene oligomerization reaction is carried out at a pressure of 0.5 to 15 MPa and at a temperature of 20°C to 180°C.